CCS Technical Documentation
RH-12/RH-28 Series Transceivers

4 - Service tools

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List of service tools

The table below shows the set of tools that can be used for testing, error-analysis and repair of the RH-12/RH-28 product.

Type Designator	Description	Part Code
DA-8	Docking station adaptor	0770546
	DA-8 Test pins	0770617
JBV-1	Docking station	0770298
SA-17	RF adaptor	0770584
PCS-1	DC power cable	0730012
SCB-3	DC cable	0730114
XCS-1	Service cable	0730218
XCS-4	Modular cable	0730178
MJ-12	Module repair jig	0770544
FLS-4S	POS flash adaptor dongle for EMEA POS flash adaptor dongle for APAC POS flash adaptor dongle for AMERICAS	0080541 0080542 0080542
FPS-8	Parallel flash prommer (Inc. AXS-4, AXS-8, ACF-8, printer cable)	0080321
	Printer cable (incl. In FPS-8 sales pack)	0730029
FPS-8C	Flash prommer box	0080396
XRF-1	RF cable	0730085
DAU-9S	MBUS cable	0730108
RJ-9	Soldering jig	0770547
MJS-76	Rework jig	0770417
SES-3	Rework stencil	0770558
SPS-1	Soldering Paste Spreader	0770381
SF-7	POS flash adaptor	0770545
	SF-7 Test pins	0770450

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JBV-1 Docking station

The JBV-1 docking station is a general tool that has been designed for calibration and software update use. The DA-8 docking station adaptor is a product-specific tool that provides signal connections to the phone. The JBV-1 and the DA-8 are used as one unit.

The JVB-1 main electrical functions include the following:

- Adjustable VBATT calibration voltage, current measurement limit voltage: VCHAR, current measurement: ICHAR
- Adjustable ADC calibration voltage via BTEM and the BSI signal
- BTEMP and BSI calibration resistor
- Signal from FBUS to the phone via the parallel jig
- Control via FBUS or USB
- Flash OK/FAIL indication

In the calibration mode the JBV-1 is powered by an external power supply: 11-16V DC. When flashing, the power for the phone can be taken from the FPS-8 or an external power supply: 11-16 V DC.

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DA-8 Docking station adaptor

The docking station adaptor is used for the RH-12/RH-28 in combination with the JBV-1. The DA-8 supports flashing and energy management calibration. If used in conjunction with the SA-17, a RF Go/NoGo test can be performed.

The MMC card is to be removed before mounting the phone on the docking station adaptor.

Features included:

- Compatible with the JBV-1
- Easy phone attachment and detachment
- Reliable phone locking (via DC-jack)
- Switch for detection of phone attachment
- Replaceable pogo pins

Product Code

DA-8 Docking station adaptor: 0770546

View of DA-8 when mounted on the JBV-1

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SA-17 RF adaptor

The SA-17 RF adaptor provides a galvanic connection to the RF output. The adaptor is intended for a Go/NoGo test. By removing the A&B covers and the antenna, the RF adaptor can be attached on the top section of the phone.

The adaptor is designed to be used with the DA-8 docking station adaptor or the SF-7 POS flash adaptor.

Product code

SA-17 RF adaptor: 0770584

View of SA-17

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MJ-12 Module repair jig

The MJ-12 Module repair jig is designed for Regional service centers to allow component level trouble shooting and testing.

Product code

MJ-12 Module Repair Jig: 0770544"

General features

- EDS proof design
- Component level access while inserted in the jig
- Access to system connector
- SIM cards reader
- UI board with key mat integrated in the jig
- Access to phone module POWER-On push button
- Access to phone module side keys (volume keys)
- Support for IrDa testing
- BT coupler for Go/NoGo test

Power supply features

- Jig and phone supply via 5mm DC jack
- 2A replaceable fuse
- Voltage regulator
- Direct power feeding (bypassing regulator with a jumper)
- Reverse voltage protection
- Over-voltage protection
- On-indicator (green LED)

Spare parts

- Pogo pins used for RF connector (0770446)
- Pogo pins used for flash I/F (needs soldering) (0770551)

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- Pogo pins used for SIM connection (needs soldering) (0770442)

View of MJ-12

Note: The supply voltage for the MJ-12 has to be kept within the range of 8-12 V when using the built in regulator. When bypassing the regulator (IMEI rewrite), the voltage must be kept below 5,4V.

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RJ-9 Soldering Jig

The RJ-9 soldering jig is used for soldering and reworking for the ez4a Main board.

Product Code

RJ-9 soldering jig: 0770547

View of RJ-9

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SES-3 Rework Stencil

The SES-3 Rework Stencil is used for PA Chip N700 (LGA type component) rework.

It is used together with the Rework Jig soldering paste spreader.

Product code

SES-3 Rework Stencil: 077031

The tools needed for rework include:

- MJS-76 Rework Jig: 0770417
- SES-3 Stencil: 0770558
- SPS-1 Soldering Paste Spreader: 0770381

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FPS-8 Flash Prommer (Sales Pack)

The Flash Prommer FPS-8 is used with e.g. DA-8 and JVB-1. Power is supplied to FPS-8 from the Universal Power Supply.

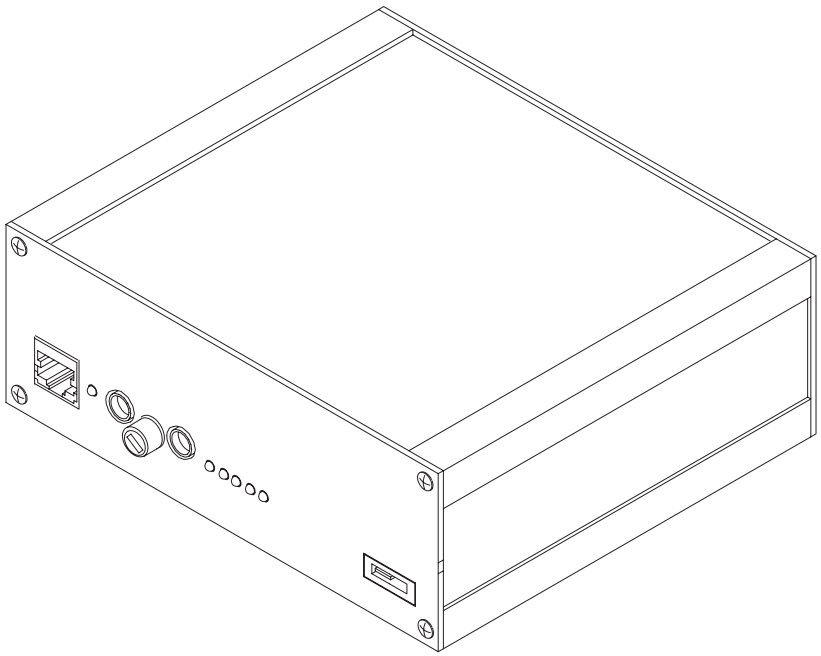
The sales pack includes:

- FPS-8 Flash Prommer: 0750123
- FPS-8 Activation Sheet: 9359289
- Universal Power Supply: 0680032
- AXS-4 Service Cable (D9-D9): 0730090
- Printer cable: 0730029

Sales package code

FPS-8 Flash Prommer: 0080321

View of FPS-8



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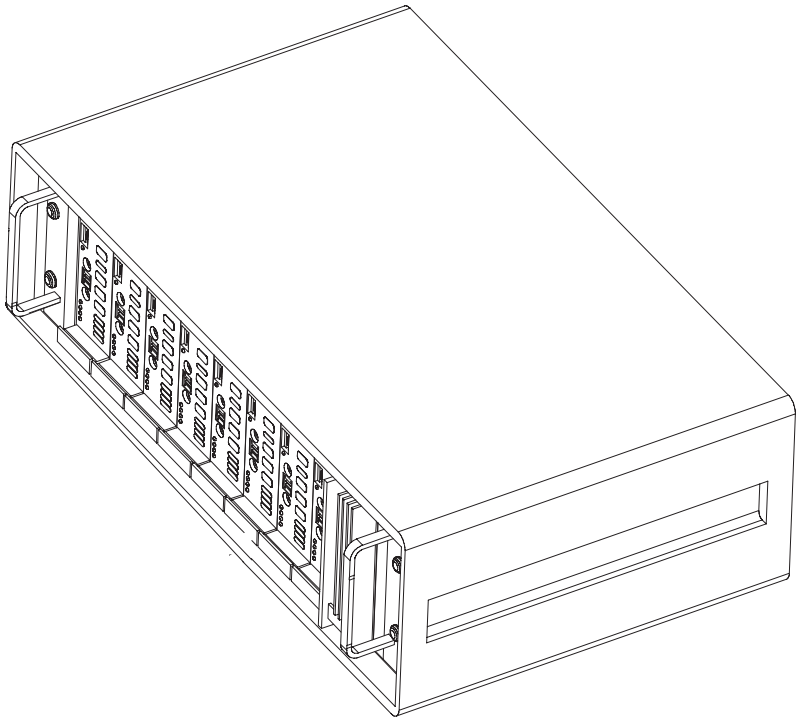
FPS-8C Parallel Flash Prommer (Sales Pack)

The Parallel Flash Prommer FPS-8C is used with DA-8 and JVB-1. Flash programming can be done to maximum of 8 phones parallel. FPS-8C consists of eight SF11C programming cards. The SF11C card is functionally identical to FPS-8.

Sales package code

FPS-8C Parallel Flash Prommer: 0080396

View of FPS-8C



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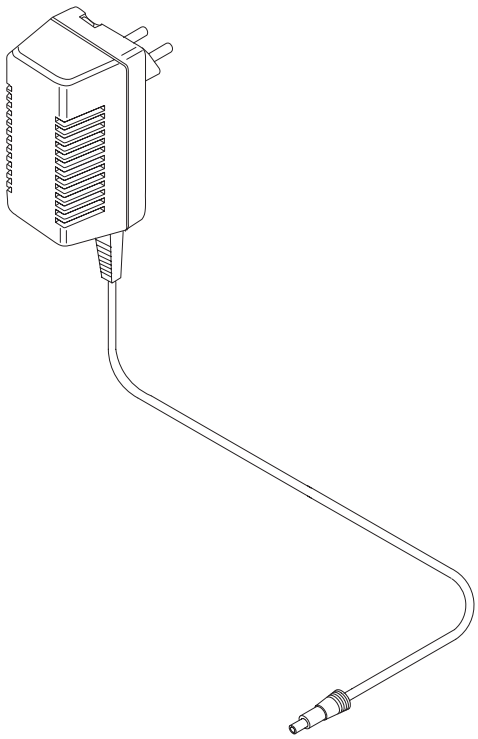
ACF-8 Universal Power Supply

The ACF-8 Universal Power Supply is used to power FPS-8. ACF-8 has 6 V DC and 2.1 A output.

Product Code

ACF-8 Universal Power Supply: 0680032

View of ACF-8



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SF-7 POS flash adaptor

The SF-7 is a POS flash adaptor provided for the RH-12/RH-28 phones.

Product Code

SF-7 POS flash adaptor: 0770545

View of SF-7

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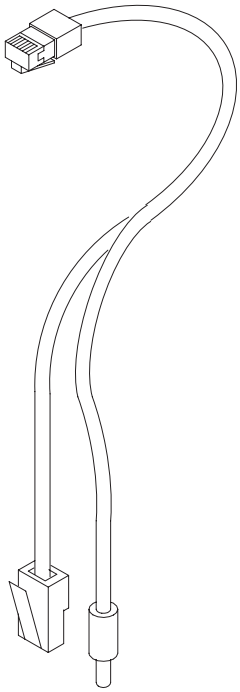
XCS-1 Service Cable

The XCS-1 Service Cable is used to connect FLS-4 to FLA-27.

Product code

XCS-1 Service Cable: 0730218

View of XCS-1



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FLS-4S POS (Point Of Sale) Flash Device (Sales Pack)

FLS-4S is a dongle and flash device incorporated into one package, developed specifically for POS use.

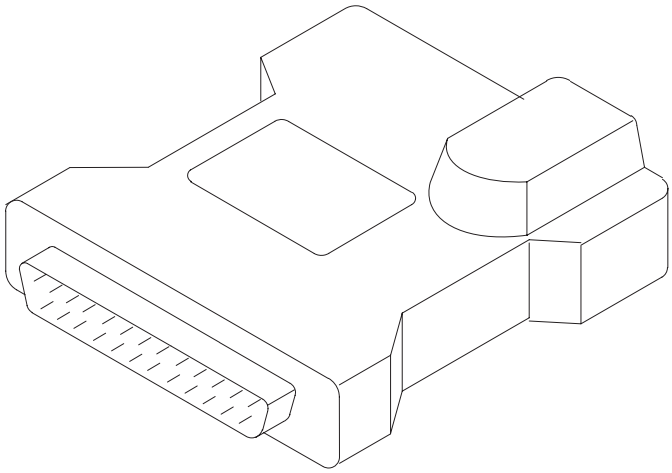
Product Code

Sales Pack (Europe/Africa): 0080541

Sales Pack (APAC): 0080542

Sales Pack: (US): 080543

View of FLS-4S



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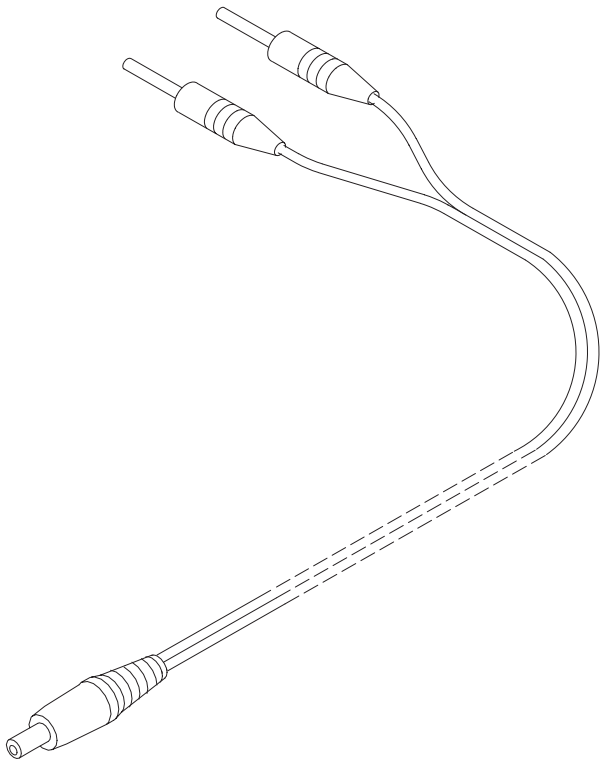
PCS-1 Power Cable

The PCS-1 Power Cable (DC) is used to connect e.g. JVB-1 to FPS-8.

Product Code

PCS-1 Power Cable: 0730012

View of PCS-1



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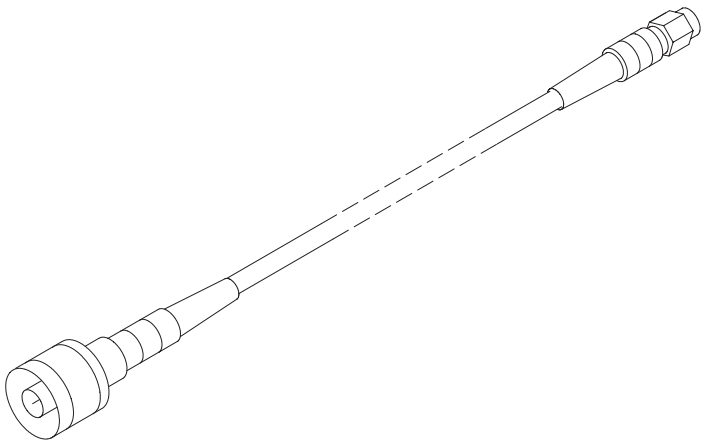
XRF-1 RF Cable

RF cable XRF-1 is used to connect e.g. Module Jig MJS-38 to RF measurement equipment.

Product code

XRF-1 RF Cable: 0730085

View of XRF-1



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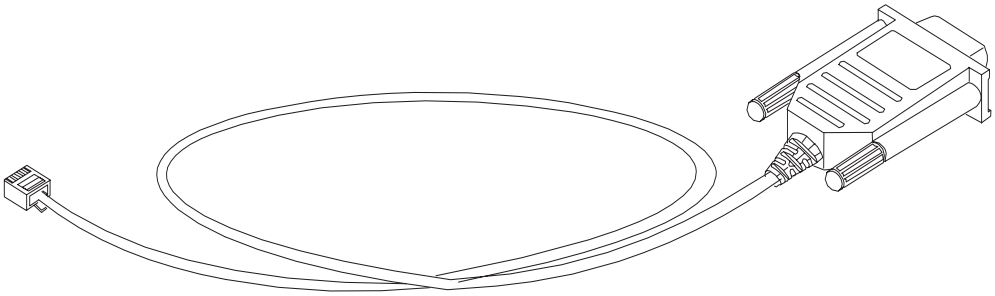
DAU-9S MBUS Cable

The MBUS Cable DAU-9S has a modular connector, and is used with between PC's serial port and e.g. Module Jig MJS-38.

Product Code

DAU-9S MBUS Cable: 0730108

View of DAU-9S



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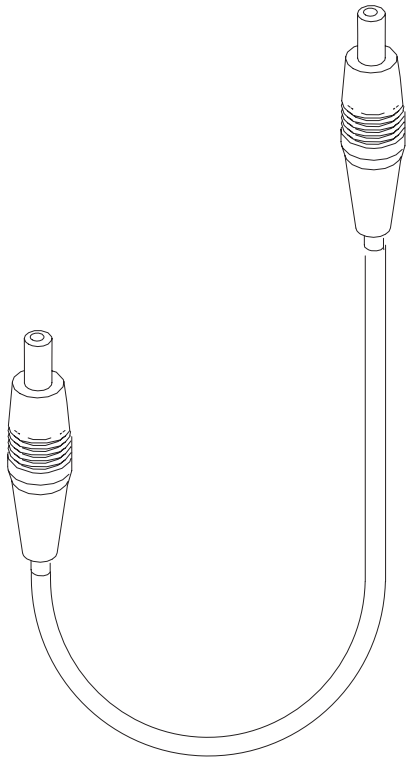
SCB-3 DC Cable

The DC Cable SCB-3 is used to connect e.g. JVB-1 to the phone.

Product Code

SCB-3 DC Cable: 0730114

View of SCB-3



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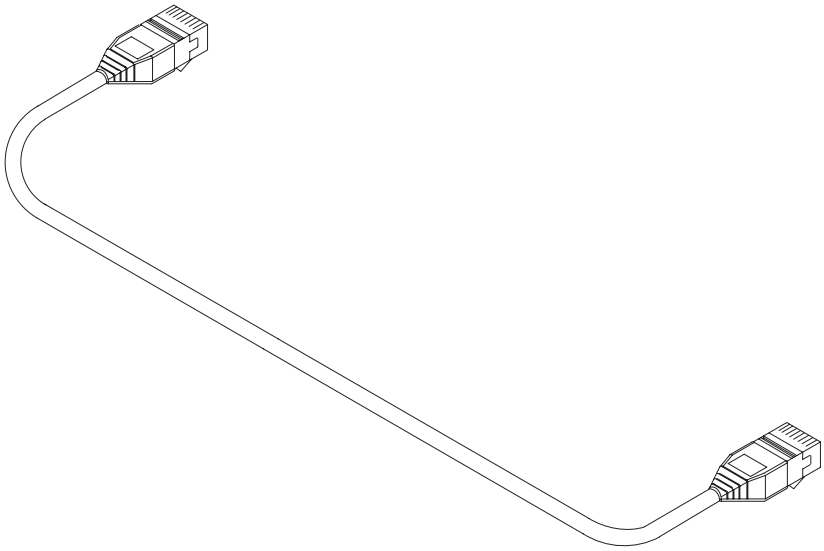
XCS-4 Modular Cable

XCS-4 is a shielded cable (one specially shielded conductor) modular cable for flashing and service purposes.

Product code

XCS-4 Modular Cable: 0730178

View of XCS-4



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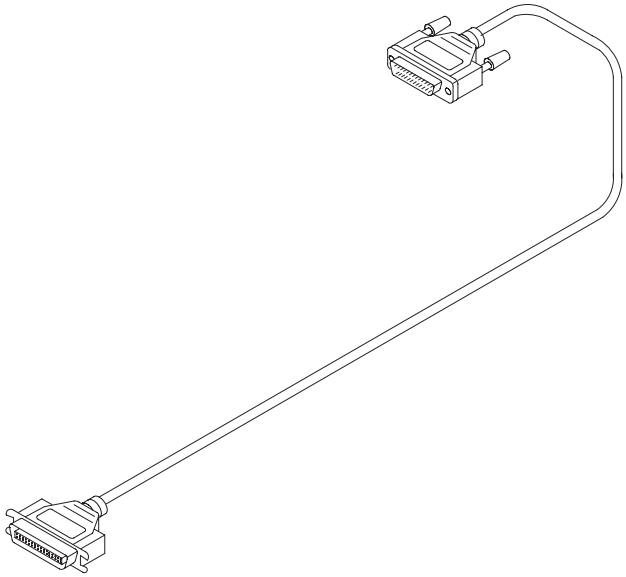
Printer Cable

This cable is used to connect the PC to FPS-8.

Product code

Printer Cable: 0730029

View of Printer Cable



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